Case qMoYcfqknfGDJMT12594 Details

**Demographics**

* 18-year-old Hispanic male; college student

**Chief complaint**

* double vision

**History of present illness**

* Character/signs/symptoms:occasional horizontal double vision when viewing distant objects
* Location:OU
* Severity:moderate
* Nature of onset:gradual
* Duration:1 year
* Frequency:intermittent
* Exacerbations/remissions:worsens at the end of the day or when fatigued; improves with rest
* Relationship to activity or function:noticed when he started college last year; mostly occurs when viewing the board in a large lecture hall
* Accompanying signs/symptoms:headaches, eyestrain, fatigue

**Secondary complaints/symptoms**

* none

**Patient ocular history**

* last eye exam 2 years ago; unremarkable

**Family ocular history**

* unremarkable

**Patient medical history**

* unremarkable

**Medications taken by patient**

* ibuprofen PRN (for headaches)

**Patient allergy history**

* NKDA

**Family medical history**

* mother: type II diabetes

**Review of systems**

* Constitutional/general health:denies
* Ear/nose/throat:denies
* Cardiovascular:denies
* Pulmonary:denies
* Dermatological:denies
* Gastrointestinal:denies
* Genitourinary:denies
* Musculoskeletal:denies
* Neuropsychiatric:headaches
* Endocrine:denies
* Hematologic:denies
* Immunologic:denies

**Mental status**

* Orientation:oriented to time, place, and person
* Mood:appropriate
* Affect:appropriate

**Clinical findings**

**Uncorrected visual acuity**

* OD:distance: 20/20
* OS:distance: 20/20

**Pupils:**

* PERRL, negative APD

**EOMs:**

* full, no restrictions OU

**Cover test:**

* distance: 14 esophoria, near: 2 esophoria

**Confrontation fields:**

* full to finger counting OD, OS

**Oculomotor system**

* Pursuits:normal
* Saccades:marked undershoots
* Fixations:normal

**Subjective refraction**

* OD:-0.25 -0.25 x 035; VA distance: 20/20; VA near: 20/20 @ 40 cm
* OS:plano -0.50 x 140; VA distance: 20/20; VA near: 20/20 @ 40 cm

**Accommodative system**

* Amplitudes:OD: 12 D, OS: 12 D, OU: 13 D
* Facility (+/- 2.00):OD: 12 cycles/minute, OS: 12 cycles/minute, OU: 9cycles/minute
* NRA/PRA:+2.25 / -2.25
* Monocular estimation method (MEM):OD: plano, OS: plano

**Vergence system**

* NPC:to the nose
* Vergences:NFV @ distance: x / 3 / 1, NFV @ near: 11 / 22 / 10; PFV @ distance: 17 / 26 / 13, PFV @ near: 18 / 24 / 16
* Facility:8 base-out/8 base-in: 7 cycles/minute

**Sensory system**

* Worth 4 dot:far: uncrossed diplopia, near: fusion/no suppression
* Stereopsis:far: none, near: 25"

**DEM test (percentile rank):**

* horizontal: 80%, vertical: 80%, ratio: 80%, errors: 90%

**Slit lamp**

* lids/lashes/adnexa:unremarkable OD, OS
* conjunctiva:normal OD, OS
* cornea:clear OD, OS
* anterior chamber:deep and quiet OD, OS
* iris:normal OD, OS
* lens:clear OD, OS
* vitreous:clear OD, OS

**IOPs:**

* OD: 14 mmHg, OS: 15 mmHg @ 4:40 pm by Goldmann applanation tonometry

**Fundus OD**

* C/D:see image 1
* macula:normal
* posterior pole:normal
* periphery:unremarkable

**Fundus OS**

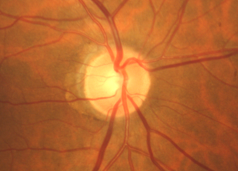
* C/D:similar to image 1
* macula:normal
* posterior pole:normal
* periphery:unremarkable

**Blood pressure:**

* 125/78 mmHg, right arm, sitting

**Pulse:**

* 68 bpm, regular



## Question 1 / 6

What is the BEST diagnosis for the patient's symptoms of diplopia and headaches?

a) Basic esophoria

b) 6th cranial nerve palsy

c) Divergence paralysis

d) Divergence insufficiency

e) Convergence excess

## Question 2 / 6

According to Sheard's criterion, which of the following BEST represents the amount of prism needed for this patient to maintain single and comfortable binocular vision?

a) 7 prism diopters base-in

b) 4 prism diopters base-out

c) 8 prism diopters base-out

d) 7 prism diopters base-out

e) 8 prism diopters base-in

f) 4 prism diopters base-in

## Question 3 / 6

Which of the following treatments has been proven to be MOST effective for patients with this diagnosis?

a) Base-out prism at distance

b) Additional minus lenses at distance

c) Vision therapy with divergence training

d) Vision therapy with convergence training

e) Base-in prism at distance

f) Additional plus lenses at distance

## Question 4 / 6

You decide to begin vision therapy on this patient with Variable Tranaglyphs. When training divergence, what do you expect the patient to observe as you increase the divergence demand?

a) The target should appear to become smaller as it moves closer

b) The target should appear to become larger as it moves farther away

c) The target should appear to become smaller as it moves farther away

d) The target should appear to become larger as it moves closer

## Question 5 / 6

When training divergence, what is the vergence demand using a Variable Tranaglyph when the separation is measured as 4 cm at a distance of 80 cm?

a) 20 prism diopters base-out

b) 10 prism diopters base-in

c) 20 prism diopters base-in

d) 5 prism diopters base-in

e) 10 prism diopters base-out

f) 5 prism diopters base-out

## Question 6 / 6

If a patient scores low on both the horizontal and vertical portions of the Developmental Eye Movement test (DEM), but the ratio and error scores are normal, what may be concluded regarding the patient's oculomotor function?

a) Normal oculomotor function, normal automaticity

b) Abnormal oculomotor function, poor automaticity

c) Abnormal oculomotor function, normal automaticity

d) Normal oculomotor function, poor automaticity